

ABSTRACT OF THE DISCLOSURE

A gas concentration sensor includes a sensor element consisting of a pump cell, a monitor cell, and a sensor cell. These cells are heated by a heater and maintained in an activated condition. A sensor control unit measures a weak element current flowing in a sensor element in accordance with the concentration of a specific gas component and intermittently supplies electric power to the heater. The sensor control unit is electrically connected via electric cables to the gas concentration sensor. The weak element current cables and the heater cable are banded together. The electric cables have a shielding layer that is provided outside a core wire through which the element current flows and is fixed to the ground potential.